

CURRICULUM VITAE (Dr Nanthi S Bolan)

GENERAL

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| Name | Bolan <i>(Family name)</i> | Nanthi Sirangie <i>(Given name)</i> |
| Occupation: | Professor of Environmental Chemistry | |
| Organisation: | Global Centre of Environmental Remediation (GCER), University of New Castle, Callaghan, NSW -2308. | |

QUALIFICATIONS

| <i>Degrees</i> | <i>Subject</i> | <i>University</i> | <i>Date</i> |
|----------------|----------------|------------------------------------|-------------|
| Ph D | Soil Science | University of Western Australia | 1983 |
| M Sc. (Ag) | Soil Science | Tamil Nadu Agricultural University | 1976 |
| B Sc. (Ag) | Agriculture | Tamil Nadu Agricultural University | 1974 |

EMPLOYMENT

| <i>Position</i> | <i>Organisation</i> | <i>Period</i> | <i>Duties</i> |
|--------------------------------------|---------------------|---------------|---|
| Professor of Environmental Chemistry | GCER, UON | 2015- | Supervision of postgraduate students, teaching undergraduate courses; initiating research collaboration, mentoring junior research scientists |
| Chair in Environmental Science | CERAR, UniSA | 2007-2015 | Supervision of postgraduate students, initiating research collaboration, mentoring junior research scientists |
| Dean of Graduate Studies | UniSA | 2008-2010 | Managing Higher Degree Research (HDR) Students' load and completion; managing HDR scholarships |
| Program Leader | CRC CARE | 2008-2009 | Managing research programs, discussion with project leaders, mapping milestone analysis for projects |
| Director –PG Studies | Massey University | 2002- | Provide Postgraduate students with the advice, administrative support and guidance |
| Professor | Massey University | 2004- | Teaching, Supervision of Postgraduate students, Member of Doctoral Research Committee |

DISTINCTIONS

| <i>Award/honour Prizes, Hons,</i> | <i>Source</i> | <i>Date</i> |
|--|--|-------------|
| Fellow of American Society of Agronomy | American Society of Agronomy | 2015 |
| Fellow of American Society of Soil Science | American Society of Soil Science | 2011 |
| Massey University Research Medal | Massey University | 2005 |
| M.L. Leamy Award | NZ Soil Science Society | 2004 |
| A Grade | Performance Based Research Funding (PBRF), NZ Ministry for Education | 2003 |
| Sir Arthur Ward Communication Award | NZ Inst. Agrl. Science | 1998 |
| Fellow of the NZ Soil Science Society | NZ Soil Science Society | 1998 |
| Humes Prize | NZ Water and Waste Association | 1998 |
| Environmental Award | Manawatu/Wanganui Regional Council | 1998 |

GRADUATE SUPERVISION AND TEACHING

| <i>Programme</i> | <i>Total supervised</i> | <i>As chief supervisor</i> | <i>Current</i> |
|------------------|-------------------------|----------------------------|----------------|
| Post-doctorate | 8 | 6 | 1 |

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|-----------------------|----|----|---|
| PhD | 42 | 36 | 5 |
| MSc/MPhil/MAppSc | 12 | 7 | - |
| PGDiploma/BSc Honours | 12 | 12 | - |

Undergraduate and postgraduate papers taught

| UG Papers | Mode | PG Papers | Mode |
|--------------------------------------|------------|--|----------|
| 189.142 Users Guide to Soils | Extramural | 189.752 Advanced Soil Fertility | Internal |
| 189.151 Soil Properties & Processes | Extramural | 189.759 Advanced Studies in Soil Science | Internal |
| 189.151 Soil Properties & Processes | Internal | 189.758 Advanced Soil Water Management | Internal |
| 189.362 Soil Fertility Management | Internal | 119.728 Land Rehabilitation | Internal |
| 189.363 Soils and the Environment | Internal | | |
| 189.365 Studies in Soil Science | Extramural | | |
| 142.405 Pollutant Transport in Soils | Internal | | |
| 142.401 Research project | Internal | | |
| 162.213 Microbial Ecology | Internal | | |

RESEARCH

My major research topics include: Nutrient dynamics in soils, soil fertility management, environmental contamination and remediation and waste utilization and wastewater irrigation. I obtained research contracts and grants from Australian Research Council (ARC Discovery), CRC CARE, government agencies, international organisations (FAO), regional councils, fertilizer companies and environmental consultancies. *Recent Grants/contracts obtained (either as project leader or as a participant)*

| Project | Amount (\$) | Year | Source |
|---|-------------|---------|-----------------------------|
| New cost-effective pathways to recover and evaluate high-grade fertilisers from organic waste streams | 793,000 | 2019-22 | Soil CRC |
| Remediation of PFAS in current and legacy biosolids application sites | 650,000 | 2018-21 | Australian Research Council |
| Tailings to Topsoil | 600,000 | 2018-21 | Muswellbrook Shire Council |
| Carbon capture and utilization | 50,000 | 2016/17 | NSW Coal Innovation |
| Biosolid application | 20,000 | 2015/16 | Cleanaway |
| Water industry Carbon | 120,000 | 2015 | SE Water |
| Carbon conundrum | 383,000 | 2014 | ARC Discovery |
| Wastewater management | 600,000 | 2012 | CRC CARE |
| Phytoremediation of landfill site | 259,000 | 2008 | CRC CARE |
| Research Chair grant | 300,000 | 2007 | UniSA |
| Carbon sequestration | 10,000 | 2008 | UniSA |
| Land use conversion | 87,000 | 2006 | NZ Land corporation |
| Thatch management | 53,000 | 2003 | NZ Golf Association |
| Nitrogen transformation | 80,000 | 2003 | Summit-Quinphos |

PUBLICATIONS

| Publication | Total | As senior author |
|---|-------|------------------|
| Book/Journal (Edited) | 5 | 3 |
| Chapter in books | 30 | 12 |
| Journal articles | 201 | 75 |
| Conference Proceedings | 68 | 23 |
| Conference Presentation | 209 | 60 |
| Popular articles, Book reviews and Bibliography | 60 | 56 |
| Press release and Reports | 35 | 24 |

Publications (since 2014 – 5 years)

Books/Journal Edited:

- Ok, Y.C., Tsang, D.C.W., Bolan, N.S. and Novak, J.M. (Ed) (2019). Biochar from biomass and waste. Elsevier, pp. 445.
- Ok, Y. S., Uchimiya, S. M., Chang, S. X., and Bolan, N.S., editors (2015) Biochar: Production, Characterization, and Applications. CRC Press, Taylor and Francis Group, Boca Raton, US. (ISBN 9781482242294)

Journal Papers/Book Chapters:

- Ramesh, T., Bolan, N. S., Kirkham, M. B., Wijesekara, H., Kanchikerimath, M., Srinivasa Rao, C., . . . Freeman, O. W. (2019). Soil organic carbon dynamics: Impact of land use changes and management practices: A review. In *Advances in Agronomy* (Vol. 156, pp. 1-107). doi:10.1016/bs.agron.2019.02.001
- Fang, Z., Gao, Y., Wu, X., Xu, X., Sarmah, A. K., Bolan, N., . . . Wang, H. (2019). A critical review on remediation of bisphenol S (BPS) contaminated water: Efficacy and mechanisms. *Critical Reviews in Environmental Science and Technology*. doi:10.1080/10643389.2019.1629802
- Xiong, X., Yu, I. K. M., Tsang, D. C. W., Bolan, N. S., Sik Ok, Y., Igalavithana, A. D., . . . Vikrant, K. (2019). Value-added chemicals from food supply chain wastes: State-of-the-art review and future prospects. *Chemical Engineering Journal*, 375, 24 pages. doi:10.1016/j.cej.2019.121983
- Bradney, L., Wijesekara, H., Palansooriya, K. N., Obadamudalige, N., Bolan, N. S., Ok, Y. S., . . . Kirkham, M. B. (2019). Particulate plastics as a vector for toxic trace-element uptake by aquatic and terrestrial organisms and human health risk. *Environment International*, 131. doi:10.1016/j.envint.2019.104937
- Yan, Y., Qi, F., Zhao, S., Luo, Y., Gu, S., Li, Q., . . . Bolan, N. (2019). A new low-cost hydroxyapatite for efficient immobilization of lead. *Journal of Colloid and Interface Science*, 553, 798-804. doi:10.1016/j.jcis.2019.06.090
- Singh, M., Sarkar, B., Bolan, N. S., Ok, Y. S., & Churchman, G. J. (2019). Decomposition of soil organic matter as affected by clay types, pedogenic oxides and plant residue addition rates. *Journal of Hazardous Materials*, 374, 11-19. doi:10.1016/j.jhazmat.2019.03.135
- Thulasinathan, B., Nainamohamed, S., Ebenezer Samuel, J. O., Soorangkattan, S., Muthuramalingam, J. B., Kulanthaisamy, M., . . . Alagarsamy, A. (2019). Comparative study on *Cronobacter sakazakii* and *Pseudomonas otitidis* isolated from septic tank wastewater in microbial fuel cell for bioelectricity generation. *Fuel*, 248, 47-55. doi:10.1016/j.fuel.2019.03.060
- Suazo-Hernández, J., Sepúlveda, P., Manquían-Cerda, K., Ramírez-Tagle, R., Rubio, M. A., Bolan, N., . . . Arancibia-Miranda, N. (2019). Synthesis and characterization of zeolite-based composites functionalized with nanoscale zero-valent iron for removing arsenic in the presence of selenium from water. *Journal of Hazardous Materials*, 373, 810-819. doi:10.1016/j.jhazmat.2019.03.125
- Yang, X. D., Qie, Y. D., Teng, D. X., Ali, A., Xu, Y., Bolan, N., . . . Zhibibula, S. (2019). Prediction of groundwater depth in an arid region based on maximum tree height. *Journal of Hydrology*, 574, 46-52. doi:10.1016/j.jhydrol.2019.04.022
- Shilpi, S., Lamb, D., Bolan, N., Seshadri, B., Choppala, G., & Naidu, R. (2019). Waste to watt: Anaerobic digestion of wastewater irrigated biomass for energy and fertiliser production. *Journal of Environmental Management*, 239, 73-83. doi:10.1016/j.jenvman.2019.02.122
- Antoniadis, V., Shaheen, S. M., Levizou, E., Shahid, M., Niazi, N. K., Vithanage, M., . . . Rinklebe, J. (2019). A critical prospective analysis of the potential toxicity of trace element regulation limits in soils worldwide: Are they protective concerning health risk assessment? - A review. *Environment International*, 127, 819-847. doi:10.1016/j.envint.2019.03.039
- Melo, T. M., Bottlinger, M., Schulz, E., Leandro, W. M., Botelho de Oliveira, S., Menezes de Aguiar Filho, A., . . . Rinklebe, J. (2019). Management of biosolids-derived hydrochar (Sewchar): Effect on plant germination, and farmers' acceptance. *Journal of Environmental Management*, 237, 200-214. doi:10.1016/j.jenvman.2019.02.042
- Shaheen, S. M., Wang, J., Swertz, A. C., Feng, X., Bolan, N., & Rinklebe, J. (2019). Enhancing phytoextraction of potentially toxic elements in a polluted floodplain soil using sulfur-impregnated organoclay. *Environmental Pollution*, 248, 1059-1066. doi:10.1016/j.envpol.2019.02.073
- Rahman, M. A., Lamb, D., Rahman (Mahmud), M., Bahar, M., Saderson, P., Hossain, Z., . . . Naidu, R. (2019). Antimony (V) removal from aqueous solution by biosolid and animal manure biochar: characterization, equilibrium and kinetics study. In *15th International Conference on the Biogeochemistry of Trace Elements (ICOBTE)*. Nanjing, China: Nanjing Agriculture University. Retrieved from <https://icobte.github.io/abstracts/Abstracts/S2/511-Rahman-A-S2.docx.html>
- Li, J., Zheng, L., Wang, S. -L., Wu, Z., Wu, W., Niazi, N. K., . . . Wang, H. (2019). Sorption mechanisms of lead on silicon-rich biochar in aqueous solution: Spectroscopic investigation. *The Science of the Total Environment*, 672, 572-582. doi:10.1016/j.scitotenv.2019.04.003

- Xu, Y., Seshadri, B., Bolan, N., Sarkar, B., Ok, Y. S., Zhang, W., . . . Dong, Z. (2019). Microbial functional diversity and carbon use feedback in soils as affected by heavy metals. *Environment International*, 478-488. doi:10.1016/j.envint.2019.01.071
- Mehra, P., Sarkar, B., Bolan, N., Chowdhury, S., & Desbiolles, J. (2019). Impact of carbonates on the mineralisation of surface soil organic carbon in response to shift in tillage practice. *Geoderma*, 339, 94-105. doi:10.1016/j.geoderma.2018.12.039
- Singh, J., Kumar, S., Alok, A., Upadhyay, S. K., Rawat, M., Tsang, D. C. W., . . . Kim, K. H. (2019). The potential of green synthesized zinc oxide nanoparticles as nutrient source for plant growth. *Journal of Cleaner Production*, 214, 1061-1070. doi:10.1016/j.jclepro.2019.01.018
- Chowdhury, S., Kim, G. H., Bolan, N., & Longhurst, P. (2019). A critical review on risk evaluation and hazardous management in carcass burial. *Process Safety and Environmental Protection*, 123, 272-288. doi:10.1016/j.psep.2019.01.019
- Chowdhury, S., Kim, G. H., Ok, Y. S., & Bolan, N. (2019). Effect of carbon and nitrogen mobilization from livestock mortalities on nitrogen dynamics in soil. *Process Safety and Environmental Protection*, 122, 153-160. doi:10.1016/j.psep.2018.11.012
- Shaheen, S. M., Niazi, N. K., Hassan, N. E. E., Bibi, I., Wang, H., Tsang, D. C. W., . . . Rinklebe, J. (2019). Wood-based biochar for the removal of potentially toxic elements in water and wastewater: a critical review. *International Materials Reviews*, 64(4), 216-247. doi:10.1080/09506608.2018.1473096
- Ye, G., Lin, Y., Liu, D., Chen, Z., Luo, J., Bolan, N., . . . Ding, W. (2019). Long-term application of manure over plant residues mitigates acidification, builds soil organic carbon and shifts prokaryotic diversity in acidic Ultisols. *Applied Soil Ecology*, 133, 24-33. doi:10.1016/j.apsoil.2018.09.008
- James, T. K., Ghanizadeh, H., Harrington, K. C., & Bolan, N. S. (2019). Effect on herbicide adsorption of organic forestry waste products used for soil remediation. *Journal of Environmental Science and Health - Part B Pesticides, Food Contaminants, and Agricultural Wastes*, 54(5), 407-415. doi:10.1080/03601234.2019.1574170
- Yang, C. -Y., Reijonen, I., Yu, H., Dharmarajan, R., Seshadri, B., & Bolan, N. (2019). Back to basic slags as a phosphorus source and liming material. In *Soil Amendments for Sustainability: Challenges and Perspectives*. US: CRC Press.
- Xia, S., Song, Z., Jeyakumar, P., Shaheen, S. M., Rinklebe, J., Ok, Y. S., . . . Wang, H. (2019). A critical review on bioremediation technologies for Cr(VI)-contaminated soils and wastewater. *Critical Reviews in Environmental Science and Technology*, 49(12), 1027-1078. doi:10.1080/10643389.2018.1564526
- Yu, H., Yang, C. -Y., Bolan, N., Dharmarajan, R., & Seshadri, B. (2018). Pilot plant demonstration of an advanced aqueous ammonia-based CO₂ capture technology: Preliminary data. In *14th International Conference on Greenhouse Gas Control Technologies, GHGT-14*. Melbourne, Australia: IEA Greenhouse Gas R&D Programme. Retrieved from <http://ghgt.info/>
- Choppala, G., Moon, E., Bush, R., Bolan, N., & Carroll, N. (2018). Dissolution and redistribution of trace elements and nutrients during dredging of iron monosulfide enriched sediments. *Chemosphere*, 201, 380-387. doi:10.1016/j.chemosphere.2018.01.164
- Dryburgh, L. M., Bolan, N. S., Grof, C. P. L., Galettis, P., Schneider, J., Lucas, C. J., & Martin, J. H. (2018). Cannabis contaminants: sources, distribution, human toxicity and pharmacologic effects. *British Journal of Clinical Pharmacology*, 84(11), 2468-2476. doi:10.1111/bcp.13695
- Barthod, J., Rumpel, C., Calabi-Floody, M., Mora, M. L., Bolan, N. S., & Dignac, M. F. (2018). Adding worms during composting of organic waste with red mud and fly ash reduces CO₂ emissions and increases plant available nutrient contents. *Journal of Environmental Management*, 222, 207-215. doi:10.1016/j.jenvman.2018.05.079
- Luo, J., Li, X., Ge, C., Müller, K., Yu, H., Huang, P., . . . Wang, H. (2018). Sorption of norfloxacin, sulfamerazine and oxytetracycline by KOH-modified biochar under single and ternary systems. *Bioresource Technology*, 263, 385-392. doi:10.1016/j.biortech.2018.05.022
- Rocco, C., Seshadri, B., Adamo, P., Bolan, N. S., Mbene, K., & Naidu, R. (2018). Impact of waste-derived organic and inorganic amendments on the mobility and bioavailability of arsenic and cadmium in alkaline and acid soils. *Environmental Science and Pollution Research*, 25(26), 25896-25905. doi:10.1007/s11356-018-2655-1
- Beiyuan, J., Tsang, D. C. W., Bolan, N. S., Baek, K., Ok, Y. S., & Li, X. D. (2018). Interactions of food waste compost with metals and metal-chelant complexes during soil remediation. *Journal of Cleaner Production*, 192, 199-206. doi:10.1016/j.jclepro.2018.04.239
- He, T., Liu, D., Yuan, J., Luo, J., Lindsey, S., Bolan, N., & Ding, W. (2018). Effects of application of inhibitors and biochar to fertilizer on gaseous nitrogen emissions from an intensively managed wheat field. *Science of the Total Environment*, 628-629, 121-130. doi:10.1016/j.scitotenv.2018.02.048

- Cho, D. W., Kim, S., Tsang, D. C. W., Bolan, N. S., Kim, T., Kwon, E. E., . . . Song, H. (2018). Contribution of pyrolytic gas medium to the fabrication of co-impregnated biochar. *Journal of CO2 Utilization*, 26, 476-486. doi:10.1016/j.jcou.2018.06.003
- Ying Yang, C., Yu, H., Li, L., Dharmarajan, R., & Bolan, N. (2018). Pilot plant demonstration of an advanced aqueous ammonia based post combustion capture of greenhouse gases. In *The 2nd International Conference on Bioresources, Energy, Environment and Materials Technology (BEEM-2018)*. S Korea: BEEM 2018, Korean Society of Environmental Biology.
- He, L., Fan, S., Müller, K., Wang, H., Che, L., Xu, S., . . . Bolan, N. S. (2018). Comparative analysis biochar and compost-induced degradation of di-(2-ethylhexyl) phthalate in soils. *Science of the Total Environment*, 625, 987-993. doi:10.1016/j.scitotenv.2018.01.002
- Shin, J. -W., Jo, S. -H., Kim, K. -H., Song, H. -N., Kang, C. -H., Bolan, N., & Hong, J. (2018). Are glass fiber particles released during the use of electronic cigarettes? Development of a semi-quantitative approach to detect glass particle emission due to vaping. *ENVIRONMENTAL RESEARCH*, 165, 267-273. doi:10.1016/j.envres.2018.04.032
- Qin, P., Wang, H., Yang, X., He, L., Müller, K., Shaheen, S. M., . . . Xu, X. (2018). Bamboo- and pig-derived biochars reduce leaching losses of dibutyl phthalate, cadmium, and lead from co-contaminated soils. *Chemosphere*, 198, 450-459. doi:10.1016/j.chemosphere.2018.01.162
- Beiyuan, J., Tsang, D. C. W., Valix, M., Baek, K., Ok, Y. S., Zhang, W., . . . Li, X. -D. (2018). Combined application of EDDS and EDTA for removal of potentially toxic elements under multiple soil washing schemes. *Chemosphere*, 205, 178-187. doi:10.1016/j.chemosphere.2018.04.081
- Fan, J., Luo, R., Liu, D., Chen, Z., Luo, J., Bolan, N., . . . Ding, W. (2018). Corrigendum to 'Stover retention rather than no-till decreases the global warming potential of rainfed continuous maize cropland' [*Field Crops Research* 219 (2018) 14–23] (S0378429017317811) (10.1016/j.fcr.2018.01.023)). *Field Crops Research*, 219, 273. doi:10.1016/j.fcr.2018.02.020
- Yang, C. -Y., Yu, H., Li, L., Dharmarajan, R., & Bolan, N. (2018). Capture and utilization of gaseous emissions from coal-fired power stations. In *The 8th Mine Rehabilitation Conference-2018*. Australia: The Tom Farrell Institute. Retrieved from <https://www.tomfarrellinstitute.org/mlrc2018.html>
- Shen, Z., Hou, D., Zhao, B., Xu, W., Ok, Y. S., Bolan, N. S., & Alessi, D. S. (2018). Stability of heavy metals in soil washing residue with and without biochar addition under accelerated ageing. *Science of the Total Environment*, 619-620, 185-193. doi:10.1016/j.scitotenv.2017.11.038
- O'Connor, D., Peng, T., Zhang, J., Tsang, D. C. W., Alessi, D. S., Shen, Z., . . . Hou, D. (2018). Biochar application for the remediation of heavy metal polluted land: A review of in situ field trials. *Science of the Total Environment*, 619-620, 815-826. doi:10.1016/j.scitotenv.2017.11.132
- Antoniadis, V., Zanni, A. A., Levizou, E., Shaheen, S. M., Dimirkou, A., Bolan, N., & Rinklebe, J. (2018). Modulation of hexavalent chromium toxicity on *origanum vulgare* in an acidic soil amended with peat, lime, and zeolite. *Chemosphere*, 195, 291-300. doi:10.1016/j.chemosphere.2017.12.069
- Huang, P., Ge, C., Feng, D., Yu, H., Luo, J., Li, J., . . . Wang, H. (2018). Effects of metal ions and pH on ofloxacin sorption to cassava residue-derived biochar. *Science of the Total Environment*, 616-617, 1384-1391. doi:10.1016/j.scitotenv.2017.10.177
- Yoo, J. C., Beiyuan, J., Wang, L., Tsang, D. C. W., Baek, K., Bolan, N. S., . . . Li, X. D. (2018). A combination of ferric nitrate/EDDS-enhanced washing and sludge-derived biochar stabilization of metal-contaminated soils. *Science of the Total Environment*, 616-617, 572-582. doi:10.1016/j.scitotenv.2017.10.310
- Kempahanumakkagari, S., Vellingiri, K., Deep, A., Kwon, E. E., Bolan, N., & Kim, K. H. (2018). Metal-organic framework composites as electrocatalysts for electrochemical sensing applications. *Coordination Chemistry Reviews*, 357, 105-129. doi:10.1016/j.ccr.2017.11.028
- Shilpi, S., Seshadri, B., Sarkar, B., Bolan, N., Lamb, D., & Naidu, R. (2018). Comparative values of various wastewater streams as a soil nutrient source. *Chemosphere*, 192, 272-281. doi:10.1016/j.chemosphere.2017.10.118
- Wijesekara, H., Bolan, N., Bradney, L., Obadamudalige, N., Seshadri, B., Kunhikrishnan, A., . . . Vithanage, M. (2018). Trace element dynamics of biosolids-derived microbeads. *Chemosphere*, 199, 331-339. doi:10.1016/j.chemosphere.2018.01.166
- Singh, M., Sarkar, B., Hussain, S., Ok, Y. S., Bolan, N. S., & Churchman, G. J. (2018). Correction to: Influence of physico-chemical properties of soil clay fractions on the retention of dissolved organic carbon (*Environmental Geochemistry and Health*, (2017), 39, 6, (1335-1350), 10.1007/s10653-017-9939-0). *Environmental Geochemistry and Health*, 40(1), 563. doi:10.1007/s10653-017-0045-0
- Thangarajan, R., Bolan, N. S., Kunhikrishnan, A., Wijesekara, H., Xu, Y., Tsang, D. C. W., . . . Hou, D. (2018). The potential value of biochar in the mitigation of gaseous emission of nitrogen. *Science of the Total Environment*, 612, 257-268. doi:10.1016/j.scitotenv.2017.08.242

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- Mehra, P., Singh, B. P., Kunhikrishnan, A., Cowie, A., & Bolan, N. (2018). Soil health and climate change: a critical nexus. In *Managing Soil Health for Sustainable Agriculture Volume 1 Fundamentals*. London: Burleigh Dodds Science Publishing.
- Sanchez-Monedero, M. A., Cayuela, M. L., Roig, A., Jindo, K., Mondini, C., & Bolan, N. (2018). Role of biochar as an additive in organic waste composting. *Bioresource Technology*, 247, 1155-1164. doi:10.1016/j.biortech.2017.09.193
- Kunhikrishnan, A., Park, J. H., Bolan, S. S., Naidu, R., & Bolan, N. (2018). Phosphorus-induced (im)mobilization of heavy metal(loid)s in soil. In H. M. Selim (Ed.), *Phosphate in Soils: Interaction with Micronutrients, Radionuclides and Heavy Metals* (pp. 1-38). Boca Raton: CRC Press.
- Xu, Y., Seshadri, B., Sarkar, B., Rumpel, C., Sparks, D., & Bolan, N. S. (2018). Microbial control of soil carbon turnover. In C. Garcia, P. Nannipieri, & T. Hernandez (Eds.), *The Future of Soil Carbon: Its Conservation and Formation* (pp. 165-194). London, UK: Academic Press. doi:10.1016/B978-0-12-811687-6.00006-7
- Liu, Y., Yan, Y., Seshadri, B., Qi, F., Xu, Y., Bolan, N., . . . Wang, L. (2018). Immobilization of lead and copper in aqueous solution and soil using hydroxyapatite derived from flue gas desulphurization gypsum. *Journal of Geochemical Exploration*, 184, 239-246. doi:10.1016/j.gexplo.2016.08.006
- Choppala, G., Kunhikrishnan, A., Seshadri, B., Park, J. H., Bush, R., & Bolan, N. (2018). Comparative sorption of chromium species as influenced by pH, surface charge and organic matter content in contaminated soils. *Journal of Geochemical Exploration*, 184, 255-260. doi:10.1016/j.gexplo.2016.07.012
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- Qi, F., Lamb, D., Naidu, R., Bolan, N. S., Yan, Y., Ok, Y. S., . . . Choppala, G. (2018). Cadmium solubility and bioavailability in soils amended with acidic and neutral biochar. *Science of the Total Environment*, 610-611, 1457-1466. doi:10.1016/j.scitotenv.2017.08.228
- Xu, Y., Seshadri, B., Sarkar, B., Wang, H., Rumpel, C., Sparks, D., . . . Bolan, N. (2018). Biochar modulates heavy metal toxicity and improves microbial carbon use efficiency in soil. *Science of the Total Environment*, 621, 148-159. doi:10.1016/j.scitotenv.2017.11.214
- Mehra, P., Baker, J., Sojka, R. E., Bolan, N., Desbiolles, J., Kirkham, M. B., . . . Gupta, R. (2018). A Review of Tillage Practices and Their Potential to Impact the Soil Carbon Dynamics. In D. L. Sparks (Ed.), *Advances in Agronomy* (Vol. 150, pp. 185-230). Cambridge, MA: Elsevier. doi:10.1016/bs.agron.2018.03.002
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